

**REMARKS**

Claims 1-8 stand rejected. Claim 5 has been canceled without prejudice or disclaimer. New claims 9-21 have been added. Claims 1, 9, 16 are independent claims.

Drawings stand objected under 37 CFR 1.84(p)(5) for failing to include features of a plurality of pins cited in claim 1 and a plurality of signal lines cited in claim 5. In response, applicant has enclosed new Figures 7 and 8 which includes plurality of pins cited in claim 1 and a plurality of signal lines cited in claim 5. Support for the drawing can be found in claims 1 and 5, which constitute a part of the original specification.

Applicant wishes to thank the Examiner for indicating that claim 5 is allowable (1) if the claim is written in an independent form incorporating all features of base and any intervening claims and (2) if the claim complies with the requirement of 35 U.S.C. 112, second paragraph. In particular, the Office Action rejects claim 5 on the ground that the use of the term “if” renders claim 5 uncertain whether the form of the claim has formed.

In response, applicant has amended the claim 5 to remove the term “if.” In addition, applicant has incorporated the amended claim 5 into claim 1, as suggested by the Examiner. Claim 1 now recites, *inter alia*, “a pair of ground pins..., wherein the edges of said ground pins are partially removed to accommodate smaller interval separating the protruding portion of said signal-carrying pin and said ground pins to the intervals separating signal lines and ground lines of a PCB for mounting the signal-carrying pin and the ground pins thereon.” Applicant respectfully submits that above features are those originally contained in claim 5, and above features remove the uncertainty and comply with the requirements of 35 U.S.C. 112, second paragraph. Thus, applicant respectfully

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requests removal of the rejection under 35 U.S.C. 112 on claim 5 and 35 U.S.C. 102 rejection on claim 1 and allow passage of new claim 1 and its dependent claims 2-8.

Claim 6, which depends on claim 1, stand rejected under 35 U.S.C. 112, second paragraph, for failing to provide proper antecedent basis for limitations “signals lines” and “ground lines”. Applicant submits that claim 1, as amended, now recites signal lines and ground lines. As such, claim 6, complies with the requirements of 35 U.S.C. 112, second paragraph. Accordingly, applicant respectfully requests removal of this rejection.

Claim 4 stands rejected under 35 U.S.C. ' 103(a) as allegedly being obvious over Oikawa. New claim 9 and its dependent claims 10-15 have been added. Claim 9 recites features of claims 1 and 4, and claims 10-15 recite features of claims 2-3 and 5-8.

Claim 9 recites, *inter alia*, “said signal-carrying pin **includes a cylindrical portion passing through said stem and a hexahedral portion protruding from the lower surface of said stem.**” The claim, as written, features a signal-carrying pin that is partly cylindrical and partly hexahedral. Moreover, the claim recites that the cylindrical portion of the pin is embedded within the stem, while hexahedral portion protrudes from the stem. Applicant submits that such features are not taught in Oikawa.

Oikawa teaches that desired “impedance can be obtained by suitably designing, among other, the shapes of the signal terminal” (Column 4, line 37-41). However, it fails to teach that the signal carrying pin may have multiple shapes at the same time. In particular, Oikawa fails to teach that a portion of the signal carrying pin is cylindrical and another portion of the pin is hexahedral, as specifically recited in claim 9.

Moreover, nowhere in Oikawa is there a teaching that cylindrical portion of the signal carrying pin is embedded within the stem and hexahedral portion of the pin protrudes from the lower surface. Accordingly, Oikawa does not teach all features of claim 9, and claim 9 is patentable over Oikawa.

Claim 3 stands rejected under 35 U.S.C. ' 103(a) as allegedly being obvious over Oikawa. New claim 16 and its dependent claims 17-21 have been added. Claim 16 recites features of claims 1 and 3; claim 17 contains features of claim 2, and further limits the features without adding a new matter; claim 18 recites features of claim 5; claim 19 recites features of claim 4 and 6; claims 20 and 21 recites new features without adding new matters.

Claim 16 recites, *inter alia*, “the lower surface of said stem has a desired characteristic impedance according to the dimensions of the protruding portion of said signal-carrying pin and said ground pins, and an interval between the protruding portion of said signal-carrying pin and said ground pins.” Applicant submits that such features are not taught in Oikawa.

In particular, Oikawa merely teaches that desired impedance can be obtained by suitably designing the shapes of the signal terminal and the base members, and choosing appropriate type of glass paste that fills the hole of its module (Column 4, line 35-43). Moreover, Oikawa merely teaches that ground and signal carrying pins that protrudes from the bottom surface of the pin may have a certain dimensions or be arranged along certain manners (Column 5, line 61 – column 6, line 21).

However, nowhere in Oikawa is there a disclosure of a lower surface of the stem having a desired characteristic impedance according to the dimension of the signal carrying and ground pins and relative locations of such pins. As such, applicant submits that Oikawa does not teach claim 18.

Accordingly, applicant submits that Oikawa does not anticipate and/or render claim 18 obvious, and claim 18, therefore is patentable over Oikawa.

Claim 20, a new dependent claim which depends on new claim 16, recites that “the glass-sealed hole functions as a waveguide.” Support for the claim can be found at page 7, line 15-21. Applicant submits that nowhere in Oikawa is there a disclosure that its hole filled with GP functions as a waveguide. Accordingly, applicant respectfully submits that new claim 20 is not anticipated and/or rendered obvious by Oikawa; therefore, claim 20 is patentable over Oikawa.

Claim 21, a new dependent claim depending on claim 16, recites that “the glass-sealed hole has a permittivity of substantially 4.1.” Support for the claim can be found at page 7, line 21 – page 8, line 2. Applicant respectfully submits that claim 21 is not taught by Oikawa, as **Oikawa teach that the glass paste that fills its hole has permittivity of approximately 5**. Accordingly, applicant respectfully submits that new claim 21 is not anticipated and/or rendered obvious by Oikawa and patentable over Oikawa.

Other claims in this application are each dependent on the independent claims 1 and 9 and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

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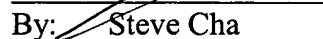
In view of the foregoing remarks, favorable reconsideration and early passage to issue of the present application are respectfully solicited. Should the Examiner deem that there are any issues which may be best resolved by telephone, please contact Applicant's undersigned representative at the number listed below.

Respectfully submitted,

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